

## PATENT ABSTRACTS OF JAPAN

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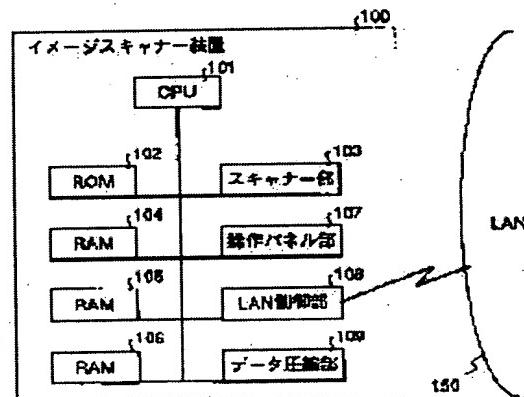
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## (54) SCANNER DEVICE COPING WITH NETWORK AND SYSTEM USING THE DEVICE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve operability at the time of reutilizing a system and the operability of the confirmation of a using condition and maintenance at the time of abnormality generation, etc., by preserving the history information of an original read condition, a transmission condition and a transmission destination, etc., and utilizing the history information as needed.

**SOLUTION:** This image scanner device 100 connected to a LAN 150 for performing network communication corresponding to a prescribed communication protocol and for transferring read image information onto the LAN 150 is provided with a CPU 101 for executing original read control and communication control, a LAN control part 108 connected to the LAN 150 for transferring the read image information onto the LAN 150 and receiving information from a reception side and a RAM 106 for storing the communication/read history information of the destination information of an opposite side on the LAN 150 and the read condition, etc.



## LEGAL STATUS

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CLAIMS

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## [Claim(s)]

[Claim 1] In the scanner equipment corresponding to the network which is connected to the network which performs network communication according to a predetermined communications protocol, and transmits reading image information on said network. The scanner control means which performs manuscript reading control and communications control, The LAN control means which connects with said network, and transmits the aforementioned reading image information on said network, and receives the hysteresis information from a receiving side, A hysteresis information storing means by which a communication link and reading hysteresis information, such as destination information on the other party on said network and reading conditions, are stored after the communication link termination by said LAN control means based on directions of said scanner control means, Scanner equipment corresponding to the network characterized by preparation \*\*\*\*\*.

[Claim 2] The scanner equipment corresponding to the network which transmits reading image information to the network which performs network communication according to a predetermined communications protocol, In the system using the scanner equipment corresponding to a network which connected Client PC with the server The scanner control means which performs manuscript reading control and communications control, The LAN control means which connects with said network, and transmits the aforementioned reading image information on said network, and receives the information from a receiving side, A hysteresis information storing means by which a communication link and reading hysteresis information, such as destination information on the other party on said network and reading conditions, are stored after the communication link termination by said LAN control means based on directions of said scanner control means, A preparation and said scanner control means are a system using the scanner equipment corresponding to the network characterized by transmitting said communication link and reading hysteresis information through said LAN control means according to the demand from said server or Client PC.

[Claim 3] The scanner equipment corresponding to the network which transmits reading image information to the network which performs network communication according to a predetermined communications protocol, In the system using the scanner equipment corresponding to a network which connected Client PC with the server The scanner control means which performs manuscript reading control and communications control, The LAN control means which connects with said network, and transmits the aforementioned reading image information on said network, and receives the information from a receiving side, A hysteresis information storing means by which a communication link and reading hysteresis information, such as destination information on the other party on said network and reading conditions, are stored after the communication link termination by said LAN control means based on directions of said scanner control means, A setting means to carry out a setup of the server address of the hysteresis information transfer point at the time of reaching the convention number of cases and this convention number of cases for hysteresis storing, or (reaching) the client PC address to said hysteresis information storing means, A preparation and said scanner control means transmit said communication link and reading hysteresis information through said LAN control means according to the demand from said server or Client PC, when the storing number of cases of said hysteresis information storing means reaches more than said convention number of cases. And the communication link and hysteresis information after this transfer The system using the scanner equipment corresponding to the network characterized by deleting.

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] It connects with networks, such as the Internet/intranet, and in case this invention transmits the read manuscript image data to the server or Client PC on a network, it saves information, such as reading conditions and communication link hysteresis, and it relates to the system using the scanner equipment and the scanner equipment corresponding to a network corresponding to a network which control transmitting to a receiving side if needed etc.

**[0002]**

[Description of the Prior Art] In recent years, use of the network system using the so-called scanner equipment corresponding to a network which connected image scanner equipment to networks (for example, Internet/intranet) shows rapid breadth. In such a network system, the read image data is transmitted to the server, Client PC, etc. through a network.

[0003] Network connection method" of an image scanner, and "the image processing system and the image-processing approach" of JP,9-219761,A are indicated along [ "image scanner ] "facsimile mold electronic mail equipment" of JP,8-242326,A, and JP,9-

37013,A as reference technical reference relevant to techniques, such as such transmitting and receiving an image data on a network.

[0004] With the "facsimile mold electronic mail equipment" of JP,8-242326,A, after changing into a format of an electronic mail the image data which read the manuscript, it transmits on a network, and in case it receives, after changing a format of an electronic mail into a format of facsimile on the contrary, it is printing to the printer. Moreover, it makes it possible to carry out direct continuation of the image scanner to "image scanner list of JP,9-37013,A by network connection method" of an image scanner in networks, such as LAN. Furthermore, by "the image processing system and the image-processing approach" of JP,9-219761,A, the destination of the image information by which the image processing was carried out with the system compound machine connected to the network was pinpointed, and the image information to the destination is transmitted.

**[0005]**

[Problem(s) to be Solved by the Invention] However, if it is in a Prior art as shown above, since the manuscript was read with scanner equipment and only the image data is transmitted to the phase hand, hysteresis of manuscript reading conditions, or the transmitting condition and a transmission place is not manageable. This had the trouble that a system could not be reused or the activity of the check of an operating condition or the maintenance at the time of an abnormal occurrence could not carry out quickly and smoothly.

[0006] This invention aims at raising workability and workability, such as a check of an operating condition, and a maintenance at the time of an abnormal occurrence, at the time of reuse of a system by being made in view of the above, saving hysteresis information, such as manuscript reading conditions, and a transmitting condition, a transmission place, and using the hysteresis information if needed.

**[0007]**

[Means for Solving the Problem] If it is in the scanner equipment corresponding to the network concerning claim 1 in order to attain the above-mentioned purpose In the scanner equipment corresponding to the network which is connected to the network which performs network communication according to a predetermined communications protocol, and transmits reading image information on said network The scanner control means which performs manuscript reading control and communications control, The LAN control means which connects with said network, and transmits the aforementioned reading image information on said network, and receives the information from a receiving side, It has a hysteresis information storing means by which a communication link and reading hysteresis information, such as destination information on the other party on said network and reading conditions, are stored after the communication link termination by said LAN control means based on directions of said scanner control means.

[0008] Moreover, if it is in the system using the scanner equipment corresponding to the network concerning claim 2 The scanner equipment corresponding to the network which transmits reading image information to the network which performs network communication according to a predetermined communications protocol, In the system using the scanner equipment corresponding to a network which connected Client PC with the server The scanner control means which performs manuscript reading control and communications control, The LAN control means which connects with said network, and transmits the aforementioned reading image information on said network, and receives the information from a receiving side, A hysteresis information storing means by which a communication link and reading hysteresis information, such as destination information on the other party on said network and reading conditions, are stored after the communication link termination by said LAN control means based on directions of said scanner control means, A preparation and said scanner control means transmit said communication link and reading hysteresis information through said LAN control means according to the demand from said server or Client PC.

[0009] Moreover, if it is in the system using the scanner equipment corresponding to the network concerning claim 3 The scanner equipment corresponding to the network which transmits reading image information to the network which performs network communication according to a predetermined communications protocol, In the system using the scanner equipment corresponding to a network which connected Client PC with the server The scanner control means which performs manuscript reading control and communications control, The LAN control means which connects with said network, and transmits the aforementioned reading image information on said network, and receives the information from a receiving side, A hysteresis information storing means by which a communication link and reading hysteresis information, such as destination information on the other party on said network and reading conditions, are stored after the communication link termination by said LAN control means based on directions of said scanner control means, A setting means to carry out a setup of the server address of the hysteresis information transfer point at the time of reaching the convention number of cases and this convention number of cases for hysteresis storing, or (reaching) the client PC address to said hysteresis information storing means, A preparation and said scanner control means transmit said communication link and reading hysteresis information through said LAN control means according to the demand from said server or Client PC, when the storing

number of cases of said hysteresis information storing means reaches more than said convention number of cases. And the communication link and hysteresis information after this transfer it deletes.

[0010]

[Embodiment of the Invention] Hereafter, the system using the scanner equipment and the scanner equipment corresponding to a network corresponding to a network of this invention is explained to a detail with reference to an accompanying drawing.

[0011] [Gestalt 1 of operation] The gestalt 1 of this operation explains the example which stores the hysteresis of the destination and transmit information to the client PC via reading information and a server, or a server in equipment.

[0012] [System configuration] Drawing 1 is the block diagram showing the system configuration using the scanner equipment corresponding to the network concerning the gestalt 1 of operation. CPU101 as a scanner control means which image scanner equipment 100 reads the control program stored in ROM102, and performs control of this equipment based on this control program, With ROM102 in which the control program of this equipment is stored, for example, the scanner section 103 which carries out an optical scan and reads the manuscript for reading using image sensors, such as CCD, RAM104 which CPU101 uses as an object for the data of a program (working memory) at the time of control action, RAM105 which was compressed in the data compression section 109 mentioned later and which reads and accumulates image data in the memory area, RAM106 as a hysteresis information storing means to have the memory area which stores reading information, and transfer information and destination information, The control-panel section 107 which has a function as a setting means to set up the reading conditions of a manuscript, or to read and to perform initiation actuation, It connected with LAN150 and has the LAN control section 108 as a LAN control means which transmits the image information to the server on a network, and the data compression section 109 which compresses the image which read in the scanner section 103 through this LAN150.

[0013] Moreover, as for LAN150, the server and Client PC other than above-mentioned image scanner equipment 100 are connected, using TCP (Transmission Control Protocol) / IP (Internet Protocol) protocol as a communications protocol the Internet / for for example, intranets.

[0014] Next, the example of processing actuation of the hysteresis of the transmit information of the image scanner equipment 100 in the system constituted as mentioned above is explained.

[0015] [Example of a system of operation] Drawing 2 is a flow chart which shows the hysteresis management method of the image scanner equipment concerning the gestalt 1 of operation. In drawing 2, first, after a user sets the manuscript for reading to the manuscript set section (not shown), he sets up the transmission place destination using the key of the control-panel section 107 (S201), and, subsequently to the control-panel section 107, sets up by the mode key which was able to establish similarly the monograph affair at the time of manuscript reading (S202). If it becomes possible to operate reading initiation after this setting actuation is completed and directions of reading initiation are performed (S203), reading of a manuscript will be started by depressions, such as a start key of the control-panel section 107, (S204).

[0016] Furthermore, with the gestalt of this operation, when depressions, such as a start key of the control-panel section 107, are made and various conditions are decided, it saves in the form of [ that destination information, reading conditions, etc. are shown in the hysteresis storing field of RAM106 at drawing 4 ] the hysteresis structure (S205). In addition, as this hysteresis information, as shown in drawing 4 , a date, time amount, manuscript size, number of sheets, resolution, the distribution destination, and a transmitting result are included.

[0017] Then, after above-mentioned actuation is completed, the set manuscript is read (S206), the image data which compressed and (S207) this compressed the read image in the data compression section 109 is accumulated in the are recording field of RAM105 (S208), and reading is completed (S209).

[0018] If above-mentioned actuation is completed, the LAN control section 108 will perform data transfer to the setting destination via LAN150 (S210). And after performing data transfer, a communication link result comes to hand from a receiving side, and the information is saved to the hysteresis storing field of RAM106 (S211).

[0019] [Gestalt 2 of operation] The gestalt 2 of this operation explains the example which performs data transfer according to the demand of the client PC to which the hysteresis information saved in RAM106 of image scanner equipment was connected via the server or the server.

[0020] [System configuration] Drawing 3 is the block diagram showing the example of a configuration of the network system concerning the gestalt 2 of operation. In drawing, the client (personal computer) PC 302-303 is connected with the image scanner equipment 100 of network correspondence, and scanner server equipment 301 at LAN150.

[0021] [Example of a system of operation] Like the above-mentioned, the image scanner equipment 100 corresponding to the network constituted as mentioned above reads a manuscript, processes a data compression etc., and performs an image data transfer to the scanner server equipment 301 or Client PC 302-303 of the destination set up beforehand. Moreover, storing processing of the hysteresis information on the gestalt 1 of operation is performed to a transfer and coincidence. The taking over of hysteresis information is made more possible than the scanner server equipment 301 or Client PC 302-303 on LAN150. Hereafter, it explains, referring to a flow chart.

[0022] the system which drawing 5 requires for the gestalt 2 of operation -- it is the flow chart which shows the hysteresis request approach of the image scanner equipment to kick. drawing 4 -- setting -- image scanner equipment 100 -- the time of an idle -- reading activity initiation of a manuscript -- or it will be in the condition of the waiting for the event from the scanner server equipment 301 connected or a client PC 302-303 (S501).

[0023] In this event standby condition, if a hysteresis transfer request performs event reception from a client PC 302 (S502), a circuit will be connected with a client PC 302 (S503). And the hysteresis information saved to the hysteresis storing field of RAM106 is taken out, and a data transfer is performed to the client PC 302 of a requiring agency (S504). After a transfer deletes hysteresis \*\*\*\*\* of RAM106 (S505).

[0024] [Gestalt 3 of operation] The gestalt 3 of this operation explains the example which performs a setup of the convention number of cases for hysteresis storing of a hysteresis storing field, and a setup of the scanner server address of the destination of the hysteresis information at the time of reaching at this convention number of cases, or the client PC address to the system construction field by the time of installation of image scanner equipment, or user setup. In addition, since the system configuration is the same as that of the gestalt of the above-mentioned operation, it omits here.

[0025] the system which drawing 6 requires for the gestalt 3 of operation -- it is the flow chart which shows the example of hysteresis automatic transfer actuation of the image scanner equipment to kick. Manuscript reading completion is carried out, and after reading to the server of the applicable address and transmitting data, this equipment saves hysteresis to the hysteresis information storing field of RAM106 (S601). The system construction table 701 is set up so that it may be shown in after this preservation (for example, drawing 7 ) (S602). And it judges whether the convention number of cases in the system construction table 701 is registered (S603), and if registered, the comparison with the convention number of cases in the system construction table 701 and the storing number of cases

of a storing field will be performed.

[0026] That is, it judges whether it is the convention number-of-cases (this example 50 affairs)  $\geq$  storing number of cases (S604). Here, if the convention number of cases is not reached, it will be in the waiting state of the next reading. On the other hand, if it judges that the convention number of cases is reached, the connection request to the destination will be performed using a redirecting address (refer to the system construction table of drawing 7 in this example) from the hysteresis automatic transfer point table in the system construction table 701 (S605). If connection with the destination is made, the hysteresis information in RAM106 will be deleted (S606).

[0027]

[Effect of the Invention] As explained above, according to the scanner equipment (claim 1) corresponding to the network concerning this invention Since a communication link and reading hysteresis information, such as destination information on the other party on the network corresponding to the image data which communicated, and reading conditions, are stored based on directions of a scanner control means after communication link termination, Saving hysteresis information, such as manuscript reading conditions, and a transmitting condition, a transmission place, can be realized, and workability and workability, such as a check of an operating condition and a maintenance at the time of an abnormal occurrence, can be raised by using the preservation information at the time of reuse of a system.

[0028] Moreover, in order to transmit the hysteresis information saved at the time of a communication link through a LAN control means according to the demand from a server or Client PC according to the system (claim 2) using the scanner equipment corresponding to the network concerning this invention, By saving hysteresis information, such as manuscript reading conditions, and a transmitting condition, a transmission place, and transmitting the information if needed being realized, and using the preservation information Workability and workability, such as a check of an operating condition and a maintenance at the time of an abnormal occurrence, can be raised at the time of reuse of a system.

[0029] Moreover, according to the system (claim 3) using the scanner equipment corresponding to the network concerning this invention When it reaches more than the convention number of cases which the storing number of cases of a hysteresis information storing means set up beforehand in addition to claims 1 or 2, a communication link and reading hysteresis information are transmitted through a LAN control means according to the demand from a server or Client PC. And the communication link and hysteresis information after this transfer Since it deletes, it cares about the capacity of a hysteresis storing field, and does not come, and all hysteresis information can be secured certainly.

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## DESCRIPTION OF DRAWINGS

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## [Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the system configuration using the scanner equipment corresponding to the network concerning the gestalt 1 of operation of this invention.

[Drawing 2] It is the flow chart which shows the hysteresis management method of the image scanner equipment concerning the gestalt 1 of operation of this invention.

[Drawing 3] It is the block diagram showing the example of a configuration of the network system concerning the gestalt 2 of operation of this invention.

[Drawing 4] It is the graph showing the example of the hysteresis structure concerning the gestalt of operation of this invention.

[Drawing 5] the system concerning the gestalt 2 of operation of this invention -- it is the flow chart which shows the hysteresis request approach of the image scanner equipment to kick.

[Drawing 6] the system concerning the gestalt 3 of operation of this invention -- it is the flow chart which shows the example of hysteresis automatic transfer actuation of the image scanner equipment to kick.

[Drawing 7] It is the graph showing the example of a system construction table concerning the gestalt 3 of operation of this invention.

## [Description of Notations]

100 Image Scanner Equipment

101 CPU

102 ROM

103 Scanner Section

106 RAM

107 Control-Panel Section

108 LAN Control Section

150 LAN

301 Scanner Server Equipment

302,303 Client PC

701 System Construction Table

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[Translation done.]

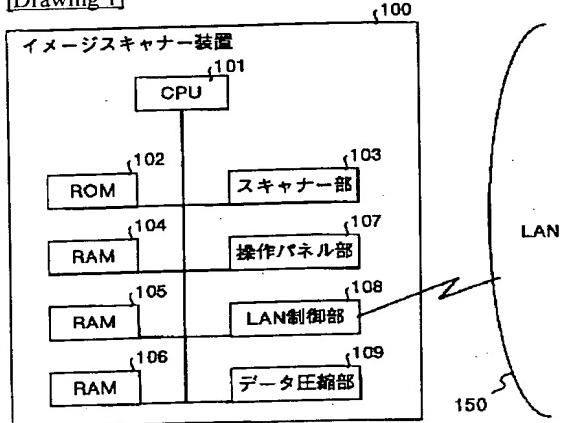
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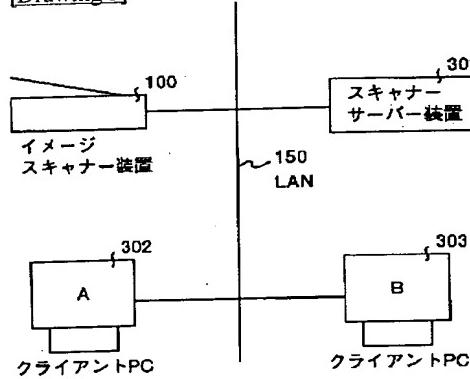
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## DRAWINGS

## [Drawing 1]



## [Drawing 3]



## [Drawing 4]

年月日	時間	原稿サイズ	枚数	解像度	配信宛て先	送信結果
980217	122450	A4	4	600DPI	AOYAMA@ABCDE.CO.JP	OK
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980218	082537	A4	2	300DPI	YOKOHAMA@ABCDE.CO.JP	OK

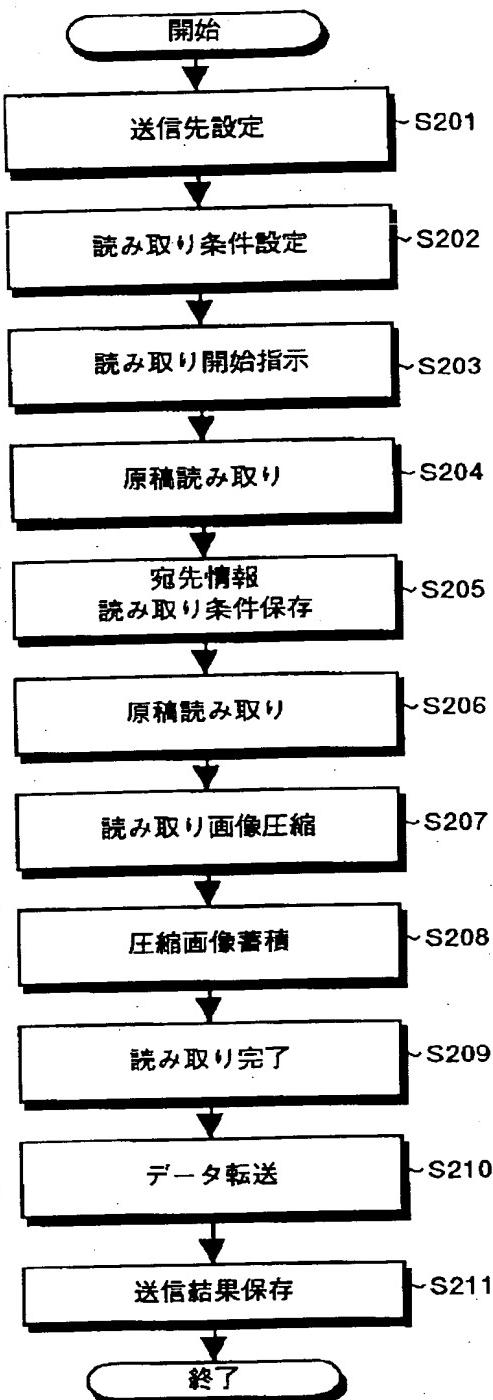
## [Drawing 7]

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規定件数	50件

システム設定テーブル

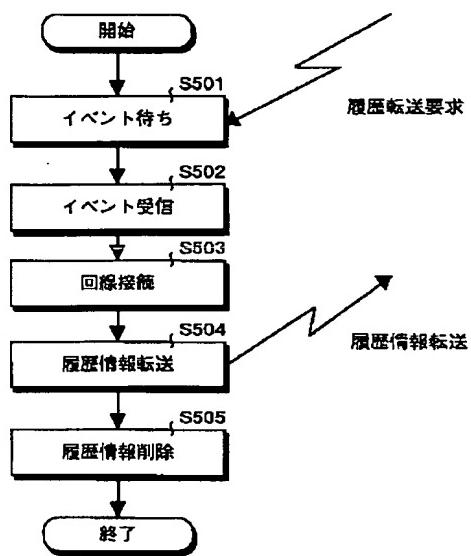
## [Drawing 2]

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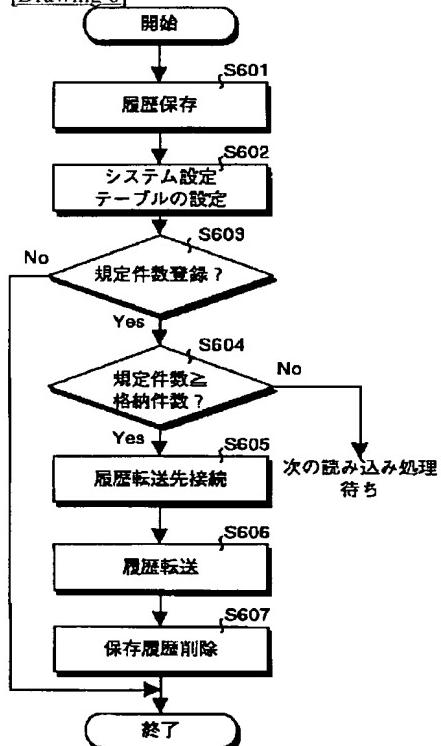


[Drawing 5]

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[Drawing 6]



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